

## Claims:

1. A bias circuit for an RF power amplifier, the RF power amplifier including an RF transistor and a first capacitor, the RF transistor having a collector, an emitter, and a base, the first  
5 capacitor having a terminal connected to the base of the RF transistor and another terminal for receiving an RF input signal, the bias circuit comprising:
  - a bias transistor having a collector, an emitter, and a base, the collector connected to a DC voltage source and the base connected to a bias voltage source; and
  - a second capacitor connected between the base of the bias transistor and ground for  
10 directly conducting part of the RF input signal coupled to the bias transistor into the ground, thereby preventing the bias transistor from being driven into a saturation state.
2. The bias circuit according to claim 1, further comprising
  - an inductor connected between the base of the RF transistor and the emitter of the bias  
15 transistor for blocking part of the RF input signal coupled to the bias transistor.
3. The bias circuit according to claim 1, wherein the bias voltage source comprises:
  - a resistor connected between the bias voltage source and the base of the bias transistor;  
and
  - 20 a plurality of diodes connected in series between the base of the bias transistor and ground for providing a predetermined voltage to the base of the bias transistor.
4. The bias circuit according to claim 3, wherein
  - each of the plurality of diodes is formed by a transistor having a configuration that a base  
25 thereof is connected to a collector thereof.